

## REMARKS

Applicants request favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Of claims 1-30 that were pending in the application, claims 1-22 and 25-30 were rejected in the Office Action. Applicants appreciate the indication of allowable subject matter in claims 23 and 24. At this time, however, Applicants have opted not to place claim 23 (*i.e.*, the claim from which claim 24 depends) in independent claim format because claim 12, *i.e.*, the claim from which claim 23 depends, is allowable in its current form, as later discussed in detail.

By way of this Amendment, Applicants have amended independent method claim 25 to recite the limitations of previously dependent claim 29 and, therefore, claim 29 has correspondingly been canceled. In addition, claim 30 has also been canceled, without prejudice or disclaimer. Accordingly, claims 1-28 remain pending for further consideration.

### **1. Rejection of Claims 1-30**

The Office Action rejected claims 1-22 and 25-30 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,781,838 (“Shinotou”). Preliminary, this rejection is now moot with respect to claims 29 and 30, which have been canceled. Accordingly, the rejection will be addressed and respectfully traversed with respect to claims 1-22 and 25-28.

#### **a. Claims 1-11**

Without amendment, claim 1 (*i.e.*, the claim from which claims 2-11 depend) continues to recite a cooling apparatus adapted for connection to a chip board. The apparatus includes, among other possible things (*italic emphasis added*):

- a heat sink having a base, *wherein the base comprises at least one mechanical fastener adapted to engage at least one corresponding mechanical fastener on a surface of a chip board containing a CPU;*
  - a cooling fan positioned adjacent the heat sink and comprising an electrical connector adapted to be connected to a corresponding electrical connector formed on the surface of the chip board;
- wherein when the at least one mechanical fastener of the base is engaged with the at least one corresponding mechanical fastener of the chip board, the electrical connector of the cooling fan is engaged with the corresponding electrical connector of the chip board.

For at least the following reasons, Shinotou fails to teach or suggest such a cooling apparatus.

In defending the rejection of claim 1, the Office Action asserts that Shinotou's plate spring 78 may be analogized to the above-italicized mechanical fastener of the base. Applicants respectfully disagree. A "fastener" is defined as (*italic emphasis added*):

One that fastens: as **a**: a device (as a button, hook and eye, zipper, or snap) that joins together separate parts or closes an opening (as to a garment) **b**: *a device for holding shut or preventing opening* <attached a chain ~ to the door> <a catch ~ on a traveling bag>[.]

WEBSTER'S THIRD INT'L DICTIONARY OF THE ENGLISH LANGUAGE UNABRIDGED (1986). In light of this definition, Shinotou's plate spring 78, which does not hold anything shut, which does not prevent anything from opening, and which is simply compressed by the contact part 71 of the lever, is clearly not a "fastener". Moreover, although Shinotou teaches two corresponding fasteners (*i.e.*, the receiving part 72a and the claw part 68), both of these fasteners are part of the chip board 52, *i.e.*, neither fastener 72a, 68 is part of the base 76 of the heat sink 58.

In light of the foregoing, as Shinotou fails to teach or suggest at least the above-italicized limitation of claim 1, Shinotou (standing alone) can not be used to reject claim 1, or any claim dependent thereon, under 35 U.S.C. § 102(e). Moreover, as claims 2-11 depend from claim 1, each of these dependent claims is also allowable over Shinotou, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 1-11 under § 102(e) is both warranted and earnestly solicited.

**b. Claims 12-22**

Without amendment, claim 12 (*i.e.*, the claim from which claims 13-22 depend) continues to recite a chip board apparatus adapted for insertion into a computer. The chip board apparatus includes, among other possible things (*italic emphasis added*):

- a chip board comprising a CPU; and
- a cooling apparatus comprising:

- a heat sink having a base, *wherein the base comprises at least one mechanical fastener engaged to at least one corresponding mechanical fastener on a surface of the chip board, and wherein the heat sink is adjacent the CPU;*

- a cooling fan positioned adjacent the heat sink and comprising an electrical connector connected to a corresponding electrical connector formed on the surface of the chip board;

wherein when the at least one mechanical fastener of the base is engaged with the at least one corresponding mechanical fastener of the chip board, the electrical connector of the cooling fan is engaged with the corresponding electrical connector of the chip board.

For at least the following reasons, Shinotou fails to teach or suggest such a chip board apparatus.

As previously discussed with respect to claim 1, Shinotou fails to teach or suggest a fastener that: (a) is part of the base 76 of the heat sink 58; and (b) engages a corresponding fastener on a chip board. Moreover, as above-italicized, claim 12 also recites a heat sink base that includes a fastener. Accordingly, the same arguments previously set forth with respect to claim 1 are equally applicable to claim 12.

In light of the foregoing, as Shinotou fails to teach or suggest at least the above-italicized limitation of claim 12, Shinotou (standing alone) can not be used to reject claim 12, or any claim dependent thereon, under 35 U.S.C. § 102(e). Moreover, as claims 13-22 depend from claim 12, each of these dependent claims is also allowable over Shinotou, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 12-22 under § 102(e) is both warranted and earnestly solicited.

**c. Claims 25-28**

As amended herein, claim 25 (*i.e.*, the claim from which claims 26-28 depend) recites a method of inserting a CPU heat sink. The method includes, among other possible steps (*italic emphasis added*):

inserting a heat sink and associated cooling fan onto a chip board proximate a CPU, wherein the step of inserting a heat sink and associated cooling fan comprises:

*aligning at least one fastener of a base to which the heat sink is connected with corresponding mechanical fasteners formed in the chip board; and*

*tightening the at least one fastener of the base to bring the base adjacent the CPU; and*

*simultaneously connecting an electrical connector of the cooling fan with a corresponding electrical connector on the chip board.*

For at least the following reasons, Shinotou fails to teach or suggest such a method of inserting a CPU heat sink.

As previously discussed with respect to claims 1 and 12, Shinotou fails to teach or suggest a fastener that: (a) is part of the base 76 of the heat sink 58; and (b) engages a corresponding fastener on a chip board. Moreover, as a result of this failure, Shinotou also fails to teach or suggest aligning a fastener of the base of the heat sink to a corresponding fastener of the chip board, as above-italicized in claim 25. Accordingly, substantially the same arguments previously set forth with respect to claims 1 and 12 are equally applicable to claim 25.

In light of the foregoing, as Shinotou fails to teach or suggest at least the above-italicized limitation of claim 25, Shinotou (standing alone) can not be used to reject claim 25, or any claim dependent thereon, under 35 U.S.C. § 102(e). Moreover, as claims 26-28 depend from claim 25, each of these dependent claims is also allowable over Shinotou, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 25-28 under § 102(e) is both warranted and earnestly solicited.

### CONCLUSION

For the aforementioned reasons, claims 1-28 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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